

WHAT IS CLAIMED IS:

- 1 1. A transmitting device for transmitting data packets over a network, the
2 transmitting device comprising:
3 a framing coordinator for creating a decreasing redundancy data packet
4 having a increasing ratio of message symbols/ redundant symbols over the length of
5 the packet; and
6 a transmitter for transmitting the decreasing redundancy data packet over the
7 network.
- 1 2. The system of claim 1 wherein the number of message symbols per codeword
2 remains constant and the number of redundant symbols decreases over the length of
3 the packet.
- 1 3. The system of claim 1 wherein the number of message symbols per codeword
2 increases over the length of the packet and the number of redundant symbols per
3 codeword remains constant.
- 1 4. The system of claim 1 wherein the number of message symbols per codeword
2 increases and the number of redundant symbols per codeword decreases over the
3 length of the packet.

1 5. A transceiver for transmitting and receiving data over a network, the
 2 transceiver comprising:
 3 a slicer for determining a signal-to-noise ratio of received packets as a function
 4 of received packet length;
 5 a block error correction calculator coupled to the slicer for determining
 6 redundancy requirements for the transceiver according to the determined signal-to-
 7 noise ratio; and
 8 a transmitter coupled to the block error correction calculator for transmitting a
 9 schedule request packet over the network, the schedule request packet including the
 10 redundancy requirements of the transceiver as determined by the block error
 11 correction calculator to inform a transmitting network device of the redundancy
 12 requirement of the transceiver.

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10. A method for negotiating the degree of redundancy in data packets transmitted by a broadcasting device over a network to multiple endpoint devices comprising the steps of:

- determining a first redundancy requirement for a first endpoint device, the first redundancy requirement comprising an increasing ratio of message symbols/redundant symbols over the length of a packet;
- determining a second redundancy requirement for a second endpoint device, the second redundancy requirement comprising an increasing ratio of message symbols/redundant symbols over the length of a packet;
- selecting a framing schedule based on the redundancy requirement having the greatest amount of redundancy; and
- transmitting data packets over the network to the first and second endpoint devices according to the framing schedule.

11. The method of claim 10 wherein the step of determining a first and second redundancy requirement further comprises the step of calculating a signal-to-noise ratio in a slicer.

12. The method of claim 11 further comprising the step of calculating the redundancy requirement in a block error correction calculator based on the signal-to-noise ratio.

1 13. The method of claim 10 wherein the step of selecting further comprises the
2 step of waiting for all endpoints devices in a network to respond with a framing
3 schedule request.

1 14. The method of claim 10 wherein the step of selecting further comprises the
2 step of checking for framing schedule requests periodically for higher redundancy
3 requests.

1 15. The method of claim 10 wherein the step of selecting further comprises the
2 step of utilizing the framing schedule of each higher redundancy framing schedule
3 request as the schedule request is received by the broadcaster device.

1 16. The method of claim 10 wherein the step of selecting further comprises the
2 step of sending the framing schedule to the endpoint devices.

1 17. The method of claim 10 wherein the step of selecting further comprises the
2 step of waiting for a schedule acknowledge message sent by all endpoint devices in
3 the network to the broadcaster device.

1 18. The method of claim 17 wherein the step of selecting further comprises the
 2 step of periodically resending the framing schedule to the endpoint devices when
 3 less than all endpoint devices in the network respond with the schedule
 4 acknowledge message.

1 19. A system for negotiating a framing schedule for block error correction on data
 2 packets in digital communications comprising:

3 means for receiving data packets at an endpoint device;

4 means for calculating an error correction redundancy requirement for the
 5 endpoint device ;

6 means for transmitting the calculated redundancy requirement from the
 7 endpoint device over the network to a broadcaster device;

8 means for determining a framing schedule in the broadcaster device based on
 9 the error correction redundancy requirement of the endpoint device; and

10 means for transmitting a data packet having an increasing ratio of message
 11 signals/redundant symbols according to the framing schedule.

20. A method for negotiating the degree of redundancy in data packets transmitted by a broadcasting device over a network to multiple endpoint devices comprising:

- means for determining a first redundancy requirement for a first endpoint device, the first redundancy requirement comprising an increasing ratio of message symbols/redundant symbols over the length of a packet;
- means for determining a second redundancy requirement for a second endpoint device, the second redundancy requirement comprising an increasing ratio of message symbols/redundant symbols over the length of a packet;
- means for selecting a framing schedule based on the redundancy requirement having the greatest amount of redundancy; and
- means for transmitting data packets over the network to the first and second endpoint devices according to the framing schedule.